

DIETHYL PHTHALATE

DPH

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 1,2-Benzenedicarboxylic acid, diethyl ester Ethyl phthalate Phthalic acid, diethyl ester		Liquid	White	Mild chemical odor
Sinks in water. Freezing point is 27°F.				
<p style="color: red;">Keep people away. Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>				
Fire	Combustible. Irritating gases may be produced when heated. Wear goggles and self-contained breathing apparatus. Extinguish with dry chemicals, foam or carbon dioxide. Water may be ineffective on fire.			
Exposure	LIQUID Not harmful.			
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.			

1. CORRECTIVE RESPONSE ACTIONS Stop discharge Collection Systems: Pump; Dredge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: C ₈ H ₁₀ (COOC ₂ H ₅) ₂ 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: Not listed 2.5 CAS Registry No.: 84-66-2 2.6 NAERG Guide No.: Not listed 2.7 Standard Industrial Trade Classification: 51385
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Rubber gloves; goggles or face shield 3.2 Symptoms Following Exposure: Symptoms unlikely from any form of exposure. 3.3 Treatment of Exposure: INHALATION: remove to fresh air. EYES: flush with water. SKIN: flush with water, wash well with soap and water. 3.4 TLV-TWA: 5mg/m ³ 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 2; oral LD ₅₀ = 1,000 mg/kg (rabbit) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Prolonged inhalation of heated vapor produces irritation of upper respiratory tract in humans 3.10 Vapor (Gas) Irritant Characteristics: Odorless 3.11 Liquid or Solid Characteristics: Currently not available 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: Not listed. 3.14 OSHA PEL-TWA: Not listed. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed	

4. FIRE HAZARDS 4.1 Flash Point: 305°F O.C. 4.2 Flammable Limits in Air: LFL 0.75% (at 368°F) 4.3 Fire Extinguishing Agents: Dry chemical, foam, carbon dioxide 4.4 Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing. 4.5 Special Hazards of Combustion Products: Irritating vapors of unburned chemical may form in fire. 4.6 Behavior in Fire: Currently not available 4.7 Auto Ignition Temperature: 855°F 4.8 Electrical Hazards: Currently not available 4.9 Burning Rate: Currently not available 4.10 Adiabatic Flame Temperature: Currently not available 4.11 Stoichiometric Air to Fuel Ratio: 64.3 (calc.) 4.12 Flame Temperature: Currently not available 4.13 Combustion Molar Ratio (Reactant to Product): 19.0 (calc.) 4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed	7. SHIPPING INFORMATION 7.1 Grades of Purity: Technical; 99+% 7.2 Storage Temperature: Ambient 7.3 Inert Atmosphere: No requirement 7.4 Venting: Open 7.5 IMO Pollution Category: C 7.6 Ship Type: 3 7.7 Barge Hull Type: Currently not available								
8. HAZARD CLASSIFICATIONS									
8.1 49 CFR Category: Not listed 8.2 49 CFR Class: Not pertinent 8.3 49 CFR Package Group: Not listed. 8.4 Marine Pollutant: No 8.5 NFPA Hazard Classification: <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">Category</td> <td style="text-align: right;">Classification</td> </tr> <tr> <td style="text-align: right;">Health Hazard (Blue).....</td> <td style="text-align: right;">0</td> </tr> <tr> <td style="text-align: right;">Flammability (Red).....</td> <td style="text-align: right;">1</td> </tr> <tr> <td style="text-align: right;">Instability (Yellow).....</td> <td style="text-align: right;">0</td> </tr> </table> 8.6 EPA Reportable Quantity: 1000 pounds 8.7 EPA Pollution Category: C 8.8 RCRA Waste Number: U088 8.9 EPA FWPCA List: Not listed		Category	Classification	Health Hazard (Blue).....	0	Flammability (Red).....	1	Instability (Yellow).....	0
Category	Classification								
Health Hazard (Blue).....	0								
Flammability (Red).....	1								
Instability (Yellow).....	0								
5. CHEMICAL REACTIVITY 5.1 Reactivity with Water: No reaction 5.2 Reactivity with Common Materials: May attack some forms of plastics. 5.3 Stability During Transport: Stable 5.4 Neutralizing Agents for Acids and Caustics: Not pertinent 5.5 Polymerization: Not pertinent 5.6 Inhibitor of Polymerization: Not pertinent	9. PHYSICAL & CHEMICAL PROPERTIES 9.1 Physical State at 15° C and 1 atm: Liquid 9.2 Molecular Weight: 222 9.3 Boiling Point at 1 atm: 569.3°F = 298.5°C = 571.7°K 9.4 Freezing Point: 27°F = -3°C = 270°K 9.5 Critical Temperature: Not pertinent 9.6 Critical Pressure: Not pertinent 9.7 Specific Gravity: 1.12 at 20°C (liquid) 9.8 Liquid Surface Tension: 37.5 dynes/cm = 0.0375 N/m at 20°C 9.9 Liquid Water Interfacial Tension: 16.27 dynes/cm = 0.01627 N/m at 20.5°C 9.10 Vapor (Gas) Specific Gravity: Not pertinent 9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent 9.12 Latent Heat of Vaporization: 170 Btu/lb = 96 cal/g = 4.0 X 10 ⁵ J/kg 9.13 Heat of Combustion: -10,920 Btu/lb = -6,070 cal/g = -254 X 10 ⁶ J/kg 9.14 Heat of Decomposition: Not pertinent 9.15 Heat of Solution: Not pertinent 9.16 Heat of Polymerization: Not pertinent 9.17 Heat of Fusion: Currently not available 9.18 Limiting Value: Currently not available 9.19 Reid Vapor Pressure: Currently not available								
6. WATER POLLUTION									
6.1 Aquatic Toxicity: 1.2 ppm/30 min/goldfish/killed/fresh water 6.2 Waterfowl Toxicity: Currently not available 6.3 Biological Oxygen Demand (BOD): Currently not available 6.4 Food Chain Concentration Potential: None 6.5 GESAMP Hazard Profile: Bioaccumulation: 0 Damage to living resources: 2 Human Oral hazard: 1 Human Contact hazard: II Reduction of amenities: X									
NOTES									

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
51	69.910		N	30	1.010	34	32.400
52	69.910		O	40	1.006	36	30.450
53	69.910		T	50	1.001	38	28.630
54	69.910			60	0.997	40	26.930
55	69.910		P	70	0.992	42	25.340
56	69.910		E	80	0.988	44	23.860
57	69.910		R	90	0.984	46	22.480
58	69.910		T	100	0.979	48	21.180
59	69.910		I	110	0.975	50	19.980
60	69.910		N	120	0.970	52	18.840
61	69.910		E	130	0.966	54	17.780
62	69.910		N	140	0.961	56	16.790
63	69.910		T	150	0.957	58	15.860
64	69.910			160	0.953	60	14.990
65	69.910			170	0.948	62	14.170
66	69.910			180	0.944	64	13.400
67	69.910			190	0.939	66	12.680
68	69.910			200	0.935	68	12.010
69	69.910					70	11.370
70	69.910					72	10.770
71	69.910					74	10.210
72	69.910					76	9.682
73	69.910						
74	69.910						
75	69.910						
76	69.910						

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
68	0.012		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T